

Remarks

Reconsideration and allowance of this application, as amended, are respectfully requested.

Claim 7 has been amended to define a propellant and explosive composition that comprises aluminum fuel particles. Claim 11 has been amended for consistency with claim 7. Claims 1-11 remain pending in the application, with claims 1-6 and 8-10 withdrawn from consideration as being directed to a non-elected group and species. Claims 1 and 7 are independent. No new matter has been introduced through the foregoing amendments. Entry of each of the amendments is respectfully requested.

The rejection of claim 11 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Instant claim 7 defines "a fluoride complex provided by treatment of aluminum particles with an aqueous solution of hydrofluoric acid and (i) a fluoride or (ii) a complex fluoride of at least one of an alkali metal and an alkaline earth metal." Instant claim 11 recites in pertinent part that "the alkali metal fluoride is potassium fluoride." Accordingly, the portion of claim 7 that recites "a complex fluoride" and "an alkali metal" provides the basis for the claim 11 recitation of "the alkali metal fluoride." Reconsideration is respectfully requested.

35 U.S.C. § 103(a) – Boulos

Claims 7 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,391,239 to Boulos.

The rejection of claims 7 and 11 under § 103(a) based on Boulos is respectfully deemed to be obviated. For at least the following reasons, the disclosure of Boulos would not have rendered obvious Applicant's claimed invention.

Applicant's presently claimed invention is directed to "a *propellant and explosive* composition comprising aluminum fuel particles having a surface layer of a fluoride complex provided by treatment of the aluminum particles."

Boulos is directed to a different technical field than that of the Applicant's invention. Boulos discloses a method for "conversion coating of aluminum" (Boulos's title of invention). The coating "provides excellent corrosion resistance and adhesion to subsequently applied paints and like protective outer coatings" (column 1, lines 15-17). An object of Boulos's invention is "to provide a conversion coating treatment for aluminum that promotes excellent corrosion resistance when used as an undercoating for paint and similar conventional outermost protective coating materials" (column 2, lines 19-23). Boulos, therefore, fails to teach a composition that includes "aluminum fuel particles having a surface layer of a fluoride complex," let alone "a *propellant and explosive* composition."

Boulos even discloses that "[a]nother object of some embodiments of the invention is to provide a *highly stable* single package concentrate" (Boulos column 2, lines 28-30). The aforementioned disclosure of Boulos teaches away from Applicant's claimed "propellant and explosive composition."

Furthermore, Boulos's process would be unsuitable for aluminum powder because the Boulos process requires *washing away* amounts of acid and reaction products (see Boulos column 8, lines 30-47). Applicant submits that it would be impossible to wash the presently claimed composition without compromising the integrity of the fluoride complex surface layer.

Therefore, a person having ordinary skill in the art simply would not look to Boulos for a teaching related to "a *propellant and explosive* composition comprising aluminum fuel particles having a surface layer of a fluoride complex provided by treatment of the aluminum particles."

Accordingly, the disclosure of Boulos would not have rendered obvious the invention defined by claim 7. Claim 11 is allowable because it depends from claim 7, and for the subject matter recited therein.


In view of the foregoing, this application is now in condition for allowance. If the examiner believes that an

U.S. Appln. No.: 10/534,023
Atty. Docket No.: P70573US0

interview might expedite prosecution, the examiner is invited to
contact the undersigned.

Respectfully submitted,

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Date: July 13, 2009